Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

1-25. (Canceled)

26. (Original) A method of searching geographic data for a terrain awareness warning system, the method comprising a plurality of alert cycles, wherein a first alert cycle of the plurality comprising:

identifying a first search vector for the geographic data based upon at least a first direction of travel and a first location of the aircraft at a first time, the search vector having a first length representing a look-ahead distance, the first search vector dependent upon a vertical velocity of the aircraft at the first time and independent of the flight angle of the aircraft at the first time;

locating the first location of the aircraft in the geographic data;

copying into a memory buffer having cells, a first subset of the geographic data corresponding to and encompassing cells corresponding to a geographic region through which the search vector extends; and

searching a portion of the memory buffer cells according to a first predetermined prioritized search order.

27. (Original) The method of claim 26, wherein searching comprises searching the memory buffer cells in a non-linear prioritized search order.

28. (Original) The method of claim 26, wherein a second alert cycle of the plurality comprising:

    identifying a second search vector for the geographic data based upon at least a second direction of travel and a second location of the aircraft at a second time, the second search vector dependent upon a vertical velocity of the aircraft at the second time and independent of the flight angle of the aircraft at the second time;

    locating the second location of the aircraft in the geographic data;

    copying a second subset of the geographic data corresponding to the second location of the aircraft and second direction of travel for the aircraft into the memory buffer;

    searching the portion of the memory buffer cells according to a second predetermined search order.

29. (Original) The method of claim 26, wherein the predetermined prioritized search order is a search order predetermined with regard to its relation to the search vector.

30. (Original) The method of claim 26, wherein each alert cycle among the plurality searches the memory buffer cells according to at least first and second predetermined prioritized search orders depending upon an external factor.

31. (Original) The method of claim 26, wherein searching comprises comparing data relative to an elevation value stored in a memory cell with a projected aircraft safety altitude for the memory cell.

32. (Original) The method of claim 31, further comprising storing in an alert list an identity of each memory cell having a data value exceeding the projected aircraft safety altitude.

33. (Original) The method of claim 32, further comprising calculating an alert status for each entry in the alert list when a predetermined number of memory cell values exceed the predetermined alert elevation value during the first alert cycle.

34. (Original) The method of claim 33, wherein calculating the alert status comprises determining a travel time for the aircraft to reach the geographic region represented by the memory cell value, determining a first pull-up time for a pilot of the aircraft to pull-up to an altitude above the elevation value stored in the cell, and comparing the travel time to a time relative to the first pull-up time.

35. (Original) The method of claim 34, wherein calculating the alert status further comprises determining a second pull-up time for the pilot of the aircraft to pull-up to an altitude above the elevation value stored in the cell plus a clearance value, and comparing the travel time to a time relative to the second pull-up time.

36. (Original) The method of claim 35, wherein each alert cycle comprises searching at least one memory cell on the search vector followed by searching at least one memory cell adjacent to the search vector followed by searching at least one unsearched memory cell on the search vector.

37. (Original) The method of claim 26, further comprising determining a terrain alert and displaying images on a terrain display, the images representative of terrain and an associated terrain alert level.